

Percent Yield of Sodium Chloride



Materials and Equipment

- | | |
|--------------------|----------------------|
| • Evaporating Dish | • Clay triangle |
| • Ring stand | • Plastic pipette |
| • Bunsen Burner | • Erlenmeyer Flask |
| • Striker | • NaHCO ₃ |
| • Balance | • HCl |
| • Goggles | |

Procedure

1. Mass the evaporating dish. Record.
2. Add 2.00 to 3.00 grams of sodium hydrogen carbonate to the evaporating dish. Place on balance. Record mass.
3. With the pipette, slowly add hydrochloric acid (HCl), to the evaporating dish until the reaction stops. CAUTION: HCl is corrosive. Report spills!!

Procedure (Cont.)

4. Slowly heat the evaporating dish until there is no more water. It should be DRY. Take caution to not crack the dish or you may lose your product.
5. When there is no more water mass the evaporating dish and product. Record.
6. Rinse and wipe the dish clean. Return all materials back to their respective places.

Data Table

Mass of evaporating dish (g)	
Mass of evaporating dish, and NaHCO_3 (g)	
Mass of evaporating dish, watch glass and product (g)	

Calculations (show all work)

1. Mass of sodium hydrogen carbonate
2. Mass of sodium chloride product
3. Theoretical yield
4. Percent yield

Conclusion

1. What does your percent yield mean?

2. What value for percent yield is ideal? How are you basing this judgment? Justify your answer.

3. Was your percent yield high/low? Explain your answer

4. Which reactant was limiting? How do you know this? Explain your answer.
